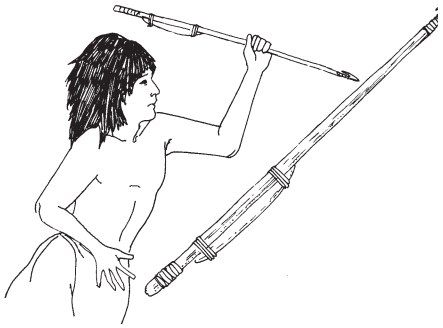
DESERT PEOPLE

Glaciers periodicaly blanketed much of the world during the Pleistocene Epoch, approximately 2.5 million to ten thousand years ago. The rivers of ice gradually receded as the epoch ended. As conditions improved, early hunters pursued herds of large animals. The land and climate differed dramatically from today. It was cooler. Lakes and swamps existed where no water remains now. Lush grasslands covered the plains, supporting mammoths, mastodons, horses, camels, and, in some areas, bison.

DESERT PEOPLE

These early people, called "Paleo Indians," are known mainly from their stone tools. One distinctive style of stone tool is called the Clovis Point. This leaf-shaped point measures four to five inches in length and was attached to a wooden spear shaft.

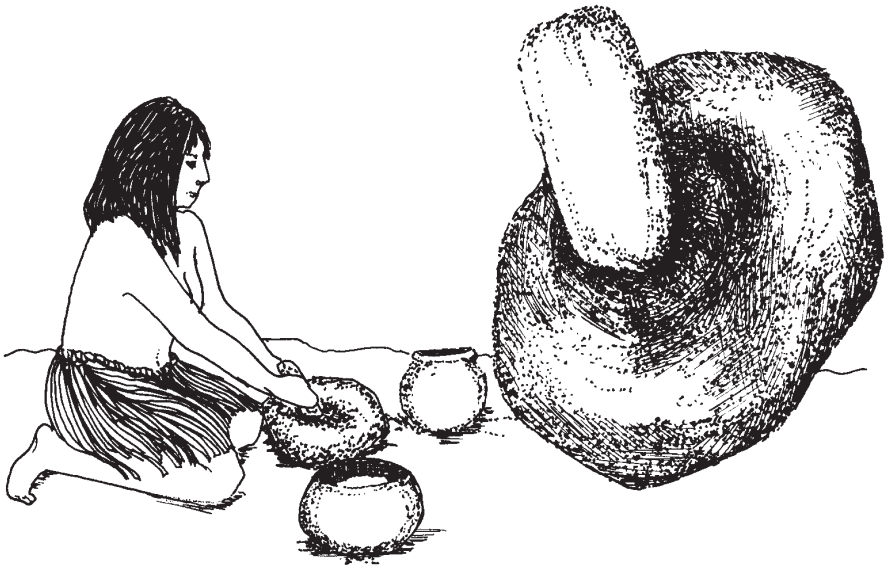
Hunters used a spear thrower, or atlatl, to propel the spear. Most atlatls were little more than a wooden shaft with a hooked end. The weapon's hollow tip fitted over the hook. A quick snap of the arm launched the spear. This revolutionary tool increased the force and speed of the spear. While improved weapons and hunting techniques possibly reduced some animal populations, erratic climatic changes probably had greater impact. Sixty animal species disappeared by the end of the Pleistocene Epoch.



Changing Lifeways

Starting ten thousand years ago, the climate in the Mojave Desert region gradually became more arid. This change meant only desert-adapted plants and animals survived. As the world changed so did the people.

Between nine and ten thousand years ago, a Desert Archaic culture began to emerge. These hunter-gatherers lived in small groups, moving from place to place as food became available — agave in the spring, cactus and mesquite beans in the summer, acorns and pinyon pine nuts in the fall. They lived in caves, rock shelters, and shelters constructed of poles and brush.



Plants dominated the diet and provided numerous medicines. Wooden digging sticks were used to dig roots and tubers. Coiled baskets held seeds and nuts. Flour was ground from seeds by rubbing a *mano* against a flat milling stone (*metate*). The flour could be cooked fresh or stored in cache pits. Cooking was done in ceramic vessels called ollas (ô'yäs) or by heating rocks in a fire and then placing them in baskets filled with liquids.

Meat supplemented the diet. Game was obtained by netting, trapping, snaring, or hunting. Almost any animal was taken — birds, bighorn sheep, jack rabbits, chuckwallas, even insects. Drying and smoking preserved the meat for later use.

The desert also provided clothing. Rabbit skins were woven into capes and blankets. Densely woven sandals of yucca fibers protected feet. Shells from the Pacific Ocean and the Gulf of California were obtained in trade and used for necklaces and other adornments.

The desert's rhythm governed all aspects of life. This seasonal search for food and resources continued for some groups until the introduction of domesticated foods encouraged a more sedentary lifestyle. For others, the hunting-gathering way of life continued until historic times.

Gardening In The Desert

Domesticated corn, beans, and squash arrived in the desert southwest some five thousand years ago. However, people did not come to depend on cultivation until as late as A.D. 800. At first, farming was casual. Seeds tossed

on partially cleared fields received little attention while the groups continued to exploit native resources. In the fall, they harvested the domesticated plants along with native seeds and nuts. Later, farming practices intensified.

As farming gained importance, groups built scattered villages on river terraces. The Anasazi living in Nevada initially built pit houses — structures partially dug into the ground and then roofed with timbers and mud. Later they built mortar and stone blockhouses known as pueblos. Other groups fashioned structures with mud and sticks, or continued to build brush shelters.

Storing The Harvest

Depending on available materials, baskets or ceramic vessels were used. Initially, Desert Indians made plain utilitarian vessels for cooking and storage. Later, some groups fashioned highly decorative wares. Stylized pottery often reflected group identity and changing time periods. Today, archeologists use the different styles of pottery as guides to understanding the people who made them.

GLOSSARY

atlatl — a throwing device, from the Aztec word meaning "spear-thrower."
mano — a stone used for grinding food by hand on a *metate*.
metate — a stone with an indented upper surface for grinding food.
petroglyph — a picture or design that is carved, pecked, or etched onto a rock surface.
pictograph — a picture or design painted onto a rock surface.
shaman — a medicine person who communicates with spirits to gain power or to cure illnesses.

DESERT PEOPLE

Changing Times

Farming produced a steady source of food. But more food meant more people. Village sizes increased, and social organization became more complex. Groups like the Anasazi flourished briefly, but farming in the desert was risky. Croplands became exhausted. Prolonged droughts brought further hardships. Social tensions may have intensified. The picture remains unclear, but we do know that groups like the Anasazi abandoned the Mojave Desert by A.D. 1150, retreating eastward.

The groups that remained —Cahuilla, Chemehuevi, Hualapai, Mohave, Serrano, Southern Paiute, Shoshone, and others —continued their traditional lifestyle until the Spanish arrived in the sixteenth century. These peoples, and the nameless ones that preceded them, left a rich legacy in human adaptation to one of the world's harshest environments — a legacy that offers important lessons to contemporary inhabitants of these lands.

Traditional Territories

Traditional territories of contemporary and prehistoric Mojave Desert inhabitants overlap the boundaries of numerous federal parks and recreation areas. These associations are summarized below:

- Death Valley National Park — Cahuilla, Chemehuevi, Serrano, Southern Paiute
- Mojave National Preserve — Kawaiisu, Serrano, Shoshone, Southern Paiute
- Joshua Tree National Park — Cahuilla, Chemehuevi, Pinto*, Serrano
- Lake Mead National Recreation Area — Anasazi*, Chemehuevi, Havasupai, Hualapai, Mohave, Southern Paiute, Yavapai
- Red Rock Canyon National Conservation Area — Anasazi*, Chemehuevi, Desert Archaic*, Mohave, Southern Paiute

* Prehistoric groups

Activity 1
Communication

OBJECTIVES: List methods by which information can be transferred from culture to culture. Name at least three reasons why preserving the knowledge of past cultures is important to modern cultures.

MATERIALS: Pictures of *pictographs* and/or *petroglyphs* from your local area, a myth or legend from a local tribe, a visit to an archeological site.

SUBJECTS: Art, language arts, social studies.

SKILLS: Analysis, communication, discussion, drawing, listening, observation, reading, reporting, research, small group work, writing.

METHOD:

1. Begin with an introduction of how we have learned valuable information about the uses of certain plants and animals from other cultures. (Example: In the Tehuacan Valley of central Mexico, tiny cobs of an early variety of corn have been unearthed from dry caves. This corn, dated approximately 5,000 B.C. is believed to have evolved from teosinte, a wild grass found in many areas of Mexico. The plant and knowledge of its propagation gradually passed from group to group up through northern Mexico and eventually into the Southwest.)

2. Ask the students to help identify some of the methods by which information might have been transferred from one culture to another. Talk about the following methods — petroglyphs, pictographs, songs, stories, archeological evidence, conversations.

3. Illustrate the transfer of knowledge by telling the following Mohave myth or another myth or legend from a local tribe.

Mastambo was standing with his arms folded. He took two steps toward the west, thinking about food. He went north two steps still thinking, then he went south two steps and stood. Now he made a little hole and spat white saliva into it. Soon something small grew from the hole. Then Mastambo said, "Listen to me. This is corn. This is squash. This is melon. This is beans." The Mohave began to plant these along the river bottom and no longer wandered through the desert.

4. Discuss the fact that if one of these methods is lost or destroyed, such as archeological evidence, we lose the ability to unlock some of the secrets of the world around us.

5. Have the students recall an important event or experience in their lives. Have them create a story about that event using pictographs or petroglyphs to record it. Have students share their stories with the class.

EXTENDING THE EXPERIENCE:
Make a list of our most commonly used food crops (corn, squash, beans, grains, potatoes). Research the origins of these crops and which native people originally used them. Create a bulletin board with pictures of modern crops and their predecessors from the wild, as well as the people who eat them today and the native people who cultivated them in the past.

Activity 2
Desert Pharmacy

OBJECTIVES: Name medicinal uses of two desert plants.

MATERIALS: Discovery Activity Page #1, natural plant parts (i.e. mesquite seeds, leaves, acorns).

SUBJECTS: Language arts, science, social studies.

SKILLS: Analysis, application, communication, discussion, observation, problem solving, reporting, research, writing.

METHOD:

1. Read or tell a story about a *shaman* or medicine person and the role he or she played in the lives of desert people.

2. Choose one student to be a traditional doctor (medicine person) and another to be a modern doctor. Have the remaining students form a circle, placing their hands behind their backs. Each student in the circle represents a different kind of plant growing in the Mojave Desert. Place the modern doctor in the center of the circle and the medicine person outside the circle.

3. Ask the modern doctor to close his/her eyes. Give the medicine person a small natural object found in the area. This object symbolizes folk medicine. (Be sure to select an object such as a fruit, nut, or seed that would not damage a plant if it were picked. Remember, these cannot be collected in National Park Service areas.)

4. As the medicine person walks around the circle, he or she says, "I know a plant which modern medicine seeks. Can the good doctor find it in my medicine chest?" After the medicine person has secretly left the folk medicine in the hands of one of the "plants," he or she stops. The modern doctor must then guess which of the plants has the medicine.

5. The doctor gets one guess. If correct, he or she becomes the next medicine person, the former medicine person becomes a plant, and the plant with the folk medicine becomes the modern doctor. If the doctor is incorrect, he or she becomes a plant, the plant with the folk medicine becomes the doctor, and the original medicine person hides the folk medicine again. If the medicine person successfully hides the folk medicine from the doctor three times, he or she becomes a plant, and a new medicine person is chosen.

6. Using the activity page, summarize this activity by describing the uses of plants by desert people to cure injuries or illnesses. How would this information be passed down from one generation to another? How would remedies be discovered?

7. More than three thousand plants are used by tribal people throughout the world. Many of these medicines were used long before modern application. Use the following examples:

• Quinine comes from the bark of various kinds of cinchona trees which grow in South America and was used by South American Indians to cure malaria. When Spaniards arrived in the Americas in the 1600s they learned its value from Native Americans. United States troops used large quantities in World War II and Viet Nam. Today quinine is used to regulate heartbeats.

• May apple (American mandrake) is a plant growing in eastern North America, bearing a single white flower and an oval yellow fruit. It was used by Penobscot Indians to treat cancer. Study of this plant led to the discovery of a useful anticancer drug from a related plant in India.

8. Conclude the activity by discussing the importance of preserving native plant communities that may be used for curing illnesses and diseases.

EXTENDING THE EXPERIENCE: Have students research a plant specific to the Mojave Desert and write a story about its medicinal uses. If possible, have a local herbalist or pharmacist visit the class to discuss modern uses of ancient medicines. Compile all the information into a medicinal plants book.

Activity 3
Native American Pottery

OBJECTIVES: State two major functions of pottery. Develop one pottery piece. Name four ways to decorate pottery.

MATERIALS: Discovery Activity Page #2, one piece of modeling clay for each student, various natural tools for making pottery designs (sticks, fiber, seashells, pine cones, feathers).

SUBJECTS: Art, social studies.

SKILLS: Classification, comparison, description, discussion, invention, small group work.

METHOD:

1. Discuss with students the former lifestyles of Native Americans living in the Mojave Desert. Discuss the type of tools the hunter-gatherers used. Then discuss how agriculture allowed a more sedentary lifestyle and how pottery provided a more durable storage container for these agri-gatherers. (Pottery was also used by hunter-gatherers.)

2. Ask students to make a list of vessels in their own homes that are strictly utilitarian (pots and pans) and those that are decorative (flower vases or pieces of sculpture). Discuss the two types of pottery (utilitarian and decorative) and the different uses of each type. **Utilitarian**: storage, cooking, and drinking vessels. **Decorative**: ceremonial objects and decorative art.

3. Discuss how the size, shape, and design of a pottery vessel might vary depending on its use. How does the design and shape of ancient pottery compare with the design and shape of objects we use today?

4. Using a piece of modeling clay, demonstrate how a pottery vessel might have been made. Where would the potter have found clay? Knead the clay and, using coils, form a vessel. Smooth out the coils using your hand or a wooden paddle. What happened to the vessel after it was formed?

5. Using the illustrations on the activity page, discuss the various techniques used to decorate a vessel and the pattern created. Why decorate the vessel?

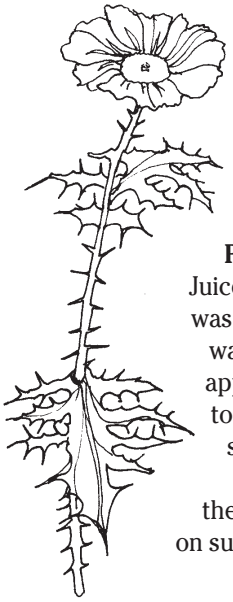
6. Divide the students into groups of four. Give each student a piece of modeling clay, and provide each group with tools for decorating their pottery vessels. Encourage students to try ancient or imaginative shapes.

EXTENDING THE EXPERIENCE: Visit a museum displaying pottery made by Native Americans. Ask an artisan to visit the class and demonstrate clay art.

Discovery Activity Page #1

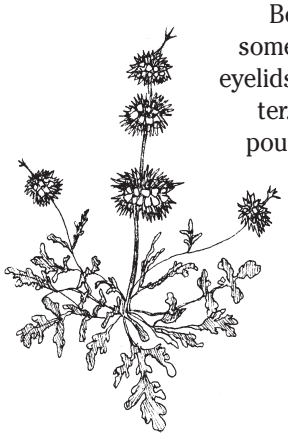
A Desert Pharmacy

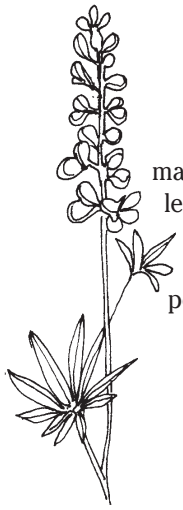
Many cultures still use some of these remedies. Remember, plants cannot be collected in National Park Service areas.
It is not advisable to use any of these remedies yourself.



PRICKLY POPPY
Juice of a fresh plant was used to burn off warts. The tea was applied to sunburn to relieve pain and swelling. An ointment made from the seeds was used on sunburn and other minor burns.

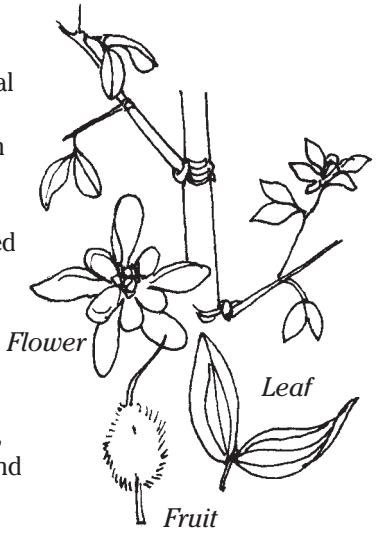
CHIA
Chia was one of the most important seed plants for the Native Americans. Seeds were harvested by beating ripe seed heads over flat, tightly woven baskets. The seeds swell when placed in water. Because of this they were sometimes placed under the eyelids to remove foreign matter. They were also used in poultices for infections. Hot mush was wrapped in a cloth and applied to the infected area. Powdered seeds were added to water to make a nutritious drink or gruel.



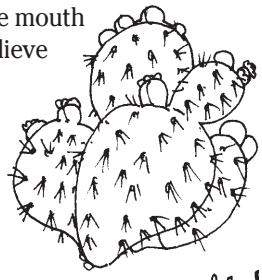


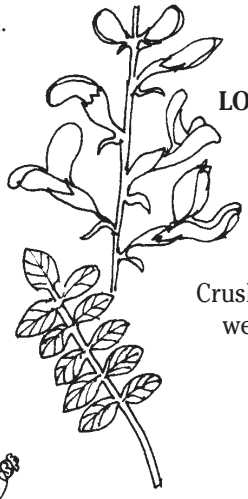
LUPINE
A lotion made of the leaves was used to treat poison ivy blisters.

CREOSOTE BUSH
Creosote bush was used in the treatment for many ailments and diseases, including colds, chest infections, intestinal discomfort, cancer, nausea, wounds, poisoning, and swollen limbs due to poor circulation. Sprigs of twigs and leaves were boiled as a tea and drunk, placed over fire to create steam that was inhaled in a sweat house, or pounded into a powder and pressed into a poultice on wounds. In the case of a snake or spider bite or scorpion sting, creosote leaves were chewed and placed on the swelling.

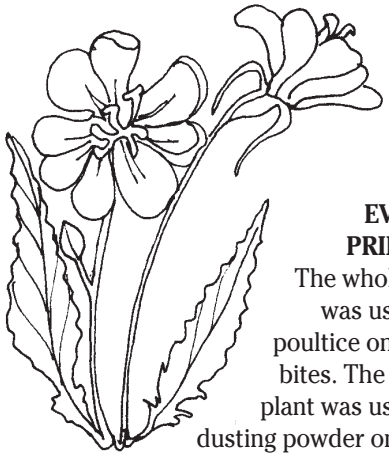


PRICKLY PEAR
Skinned pads were used as a poultice for infections and cuts. They were placed against the injured area for several hours to absorb fluids. Pieces were held in the mouth to relieve gum pain.



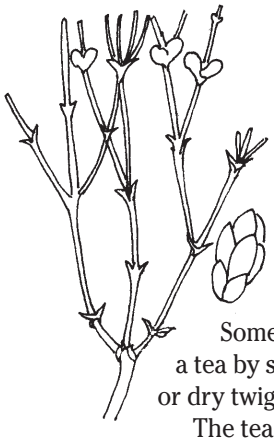


LOCO WEED
This plant was used to treat stomach disorders. Crushed leaves were used to soothe a bad back.



EVENING PRIMROSE
The whole plant was used as a poultice on spider bites. The ground plant was used as a dusting powder on sores.

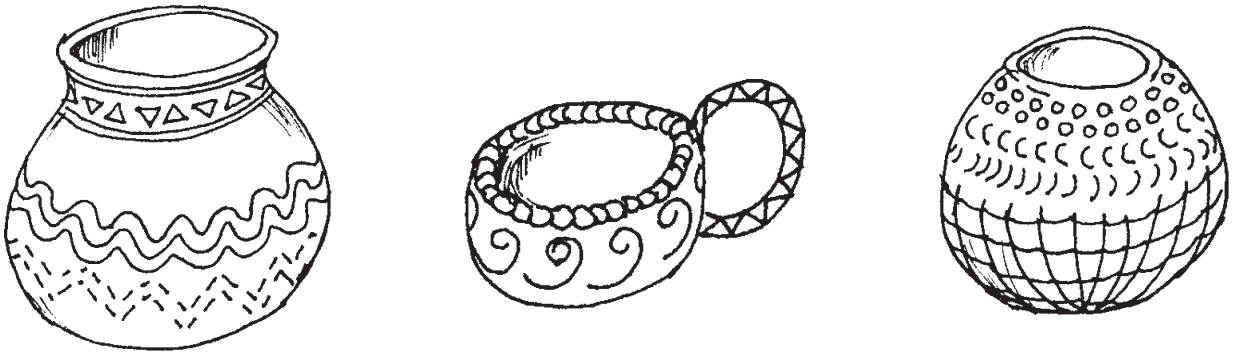
FILAREE
Filaree was used to treat excessive bleeding and animal bites.

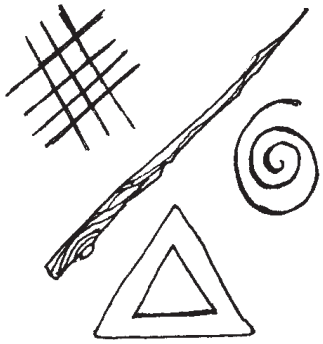


MORMON TEA
Some people still brew a tea by steeping the green or dry twigs in boiling water. The tea was used to treat kidney ailments and stomach disorders, as well as to purify the blood.

Discovery Activity Page #2

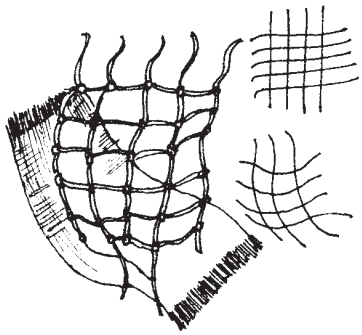
Decorated Pottery



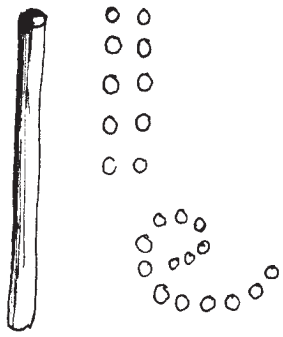


Incising Using a Pointed Stick

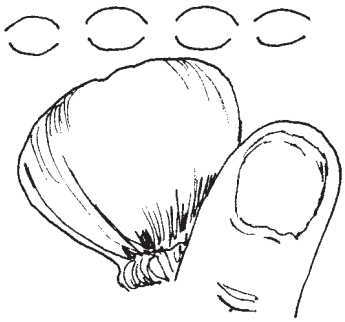
Cord Impressions



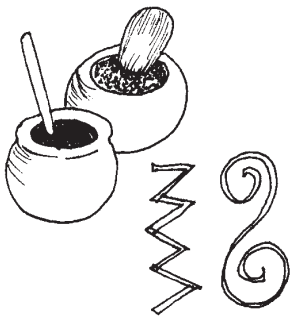
Net and Fabric Impressions



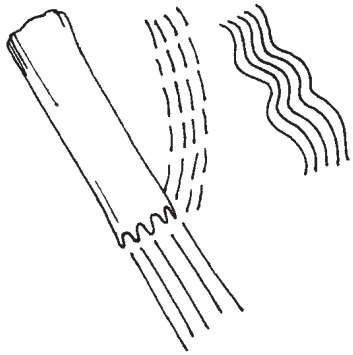
Using a Dowel



Shell or Fingernail



Painting Designs



Combining with a Notched Stick